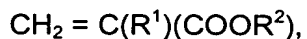


### Claims

1. A polyacrylate pressure-sensitive adhesive which essentially comprises a polymer formed from

5 a) a comonomer mixture comprising

a1) acrylic acid and/or acrylic esters of the following formula



where  $\text{R}^1 = \text{H}$  or  $\text{CH}_3$  and  $\text{R}^2$  is an alkyl chain having 1 - 20 carbon atoms, at 55% - 99% by weight, based on component (a),

10 a2) olefinically unsaturated monomers having functional groups, specifically in particular

having hydroxyl groups, sulfonic acid groups, ester groups, ether groups, anhydride groups, epoxy groups, amide groups, amino groups, having aromatic, heteroaromatic and/or heterocyclic groups,

15 at 0 - 30% by weight, based on component (a),

a3) acrylate or methacrylate having at least one functional group

at 1% - 15% by weight, based on component (a), which is capable of reacting with a photochemically generated base b), with or without addition of a catalyst,

the polymer being thermally crosslinked at least partly with a base b) in a fraction of

20 0.01% - 25% by weight, based on the overall polymer mixture.

2. The polyacrylate pressure-sensitive adhesive of claim 1, characterized in that use is made for the monomers a1) of acrylic monomers which comprise acrylic and methacrylic esters having alkyl groups consisting of 4 to 14 carbon atoms, preferably 4 to 9 carbon  
25 atoms, especially n-butyl acrylate, n-pentyl acrylate, n-hexyl acrylate, n-heptyl acrylate, n-octyl acrylate, n-nonyl acrylate, lauryl acrylate, stearyl acrylate, behenyl acrylate, and/or their branched isomers, such as 2-ethylhexyl acrylate, for example.

3. The polyacrylate pressure-sensitive adhesive of claim 1 or 2, characterized in that use  
30 is made for the monomers a3) of comonomers containing at least one carboxylic acid group, one isocyanato group or one epoxide group, preferably glycidyl methacrylate, acrylic acid, methacrylic acid or 2-isocyanatoethyl methacrylate.

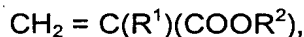
4. The polyacrylate pressure-sensitive adhesive of any one of claims 1 to 3, characterized  
35 in that as photobase generators use is made of O-acyl oximes, anilide derivatives,

ammonium salts or organometallic compounds which liberate a base under UV irradiation.

5. A process for preparing polyacrylate hotmelt pressure-sensitive adhesives from polymers formed from

a) a comonomer mixture comprising

a1) acrylic acid and/or acrylic esters of the following formula



where  $\text{R}^1 = \text{H}$  or  $\text{CH}_3$  and  $\text{R}^2$  is an alkyl chain having 1 - 20 carbon atoms,

at 55% - 99% by weight, based on component (a),

a2) olefinically unsaturated monomers having functional groups, specifically having hydroxyl groups, sulfonic acid groups, ester groups, ether groups, anhydride groups, epoxy groups, amide groups, amino groups, having aromatic, heteroaromatic and/or heterocyclic groups,

at 0 - 30% by weight, based on component (a),

a3) acrylate or methacrylate having at least one functional group

at 1% - 15% by weight, based on component (a), which is capable of reacting with the base generated by b), with or without a catalyzing compound,

and b) at least one photobase generator

at 0.01% - 25% by weight, based on the overall polymer mixture,

where b) is incorporated by mixing or copolymerization and where the solvent-free polymer or the polymer substantially freed from solvent is coated with the photobase generator, in a hotmelt process, onto a backing, and during or after its coating is irradiated with UV light, thereby generating a base photochemically, and the composition is subsequently crosslinked thermally by reaction at least of component a3) with the base.

6. The process of claim 5, characterized in that the solvent is removed with heating under reduced pressure.

7. The process of claim 5 or 6, characterized by placement of the polymer onto a film of water, with subsequent transfer to the backing material, the water preferably contributing to the crosslinking of the pressure-sensitive adhesive.

8. The process of any one of claims 5 to 7, characterized in that UV irradiation takes place during coating.

9. The process of any one of claims 5 to 8, characterized in that the polyacrylate pressure-sensitive adhesive on the backing material is irradiated with UV light over its full area and subsequently heated, for the purpose of thermal crosslinking, to at least 80°C, preferably to about 100°C.

10. The process of any one of claims 5 to 8, characterized in that structured polyacrylates are prepared by performing a structured crosslinking by irradiating the base polymer with ultraviolet light in such a way that only certain regions of the polymer mixture are exposed to UV radiation.

11. The process of claim 10, characterized in that the base polymer is irradiated with ultraviolet light through a perforated mask in such a way that only certain regions of the polymer mixture are exposed to UV radiation.

12. The process of claim 10 or 11, characterized in that the base polymer is irradiated with ultraviolet light through a film whose surface has regions of different UV light transparency in such a way that certain regions of the polymer mixture are exposed to different intensities of UV radiation.

13. The use of the polyacrylate pressure-sensitive adhesive of any one of claims 1 to 4 or of the hotmelt pressure-sensitive adhesive prepared according to any one of claims 5 to 12 for pressure-sensitive adhesive tapes and strips coated on one or both sides with the polyacrylate pressure-sensitive adhesive.